IN THE SPECIFICATION:

Please replace the paragraph in the Specification beginning on page 1, line 10 with the following replacement paragraph:

-- Among the key characteristics of ion-selective electrodes are their sensitivity, accuracy and reliability. Sensitivity refers to the ability of the electrode to detect low levels of ion in solution. Accuracy refers to the correctness of the resultant reading. Reliability refers to the ability [to the ability] of the electrode to maintain its characteristics over extended periods of time.—

Please replace the paragraph in the Specification beginning on page 4, line 8 with the following replacement paragraph:

-- As indicated above, the reference half cell construction is accompanied by enlargement of the upper end of the reference body into a chamber of substantially greater cross section, and thus volume per unit length, than the main body of the tube to which it connects. For example, in one implementation we have constructed a chamber having an internal diameter of approximately 6-8 millimeters, and a length of approximately 35-40 millimeters, resulting in a volume of 200-300 mm^3. The lower end of the chamber communicated with the remainder of the reference body in the form of a narrow tube of approximately 1-2 millimeters, and providing a total volume at least several times less than that of the chamber.[[.]] The reference lead was sealed to the upper end of the chamber. The chamber was further thermally isolated from the sensing tip by enclosing it in a separate housing thermally insulated from the main body of the electrode. In the particular

implementation described here, the thermal isolation was provided by gaskets of low thermal conductivity interposed between the main body and the chamber housing. This construction was found to significantly extend the lifetime of electrodes.—

Please replace the paragraph in the Specification beginning on page 6, line 1 with the following replacement paragraph:

-- of the tube in a flame or other heat source in known manner in order to [[from]] form an extended tube at one end thereof, and an enlarged electrode chamber at the other end. The extended tube portion is then formed into a helix while under heat. Thus, a continuous reference electrode structure having a tube coil feeding into an enlarged electrode chamber is thereby formed. In another embodiment, the electrode chamber is formed separately from the helical coil, and the two are joined through a gasket press-fitted into the chamber at the distal end thereof. In one such embodiment, the gasket is a cylindrical plug. In another, the gasket has a midsection of reduced diameter to thereby form upper and lower ribs which separately contact the interior of the chamber wall to provide a tighter seal therewith.—

Please replace the paragraph in the Specification beginning on page 9, line 4 with the following replacement paragraph:

-- Referring more specifically to Figs. 3A-D, a more detailed description of a preferred form of construction of the electrode chamber will now be given. The electrode assembly for the chamber advantageously starts as a cylindrical tube 56 whose upper end 56a is flared to facilitate attachment to the electrode chamber [housing 43] 42. An electrically conductive lead 48, of substantially greater length than the tube 54, is inserted into the tube 56, with the upper end of the lead located somewhat below the top of the

tube, as shown in Fig. 3B, and the lower end extending outwardly from the tube. The upper end of lead 48 preferably has a crook 48a or may be coiled or looped for reasons which will become clear hereinafter. A lower portion [[50]] 52 of the tube 56 is then sealed in order to form a fluid-tight bond between the tube and the lead 48 on the interior of the tube. For example, when the tube is of glass, the seal is readily accomplished by heating the lower portion of the tube until the glass starts to melt and to reform itself about the lead 48. In the process of subsequently cooling, the lower portion of the tube shrinks inwardly around the lead to form the solid post [[46]] 44 in which electrode lead 48 is now embedded. This process leaves a well 58 in the upper end of tube 44 into which the upper end 48a of lead 48 extends. That portion of lead 48 extending downwardly and exteriorly of post 44 is then coiled around the post on the exterior thereof to complete construction of the electrode assembly 46 (see Fig. 3C).—

Please replace the paragraph in the Specification beginning on page 9, line 22 with the following replacement paragraph:

-- As shown in Fig. 3D, the assembly 46 is next fluid-tight bonded to the upper face of electrode chamber housing [[43]] 42; prior to this, the upper end of the chamber is open. Conductive lead 54 is then bonded to the electrode assembly for connecting it to external circuitry (not shown). This is preferably accomplished simply by melting a conductive material such as platinum into the well 58 (see Fig. 3C) of electrode assembly 44 and thereafter inserting the lead 54 into the well. On cooling, the molten material solidifies into a mass 60 that encompasses the exposed portion 48a of lead 48 and thereby provides a low-resistance electrical connection to lead 54.—

Please delete the period on page 11, line 14.